

SEQUENCE LISTING

<110> Coyle, Anthony J.
Fraser, Christopher C.
Manning, Stephen

<120> B7-H2 Molecules, Novel Members of the B7
Family and Uses Thereof

<130> 35800/236924

<140> 09/910,174
<141> 2001-07-20

<150> US 09/620,461
<151> 2000-07-20

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Met Ile Phe Leu Leu Met Leu Ser Leu Glu
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Leu Gln Leu His Gln Ile Ala Ala Leu Phe Thr Val Thr Val Pro Lys
15 20 25

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Glu Leu Tyr Ile Ile Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn
30 35 40

ttt gac act gga agt cat gtg aac ctt gga gca ata aca gcc agt ttg 254
Phe Asp Thr Gly Ser His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu

45

50

55

caa aag gtg gaa aat gat aca tcc cca cac cgt gaa aga gcc act ttg 302
 Gln Lys Val Glu Asn Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu
 60 65 70 75

ctg gag gag cag ctg ccc cta ggg aag gcc tcg ttc cac ata cct caa 350
 Leu Glu Glu Gln Leu Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln
 80 85 90

gtc caa gtg agg gac gaa gga cag tac caa tgc ata atc atc tat ggg 398
 Val Gln Val Arg Asp Glu Gly Gln Tyr Gln Cys Ile Ile Ile Tyr Gly
 95 100 105

gtc gcc tgg gac tac aag tac ctg act ctg aaa gtc aaa gct tcc tac 446
 Val Ala Trp Asp Tyr Lys Tyr Leu Thr Leu Lys Val Lys Ala Ser Tyr
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agg aaa ata aac act cac atc cta aag gtt cca gaa aca gat gag gta 494
 Arg Lys Ile Asn Thr His Ile Leu Lys Val Pro Glu Thr Asp Glu Val
 125 130 135

gag ctc acc tgc cag gct aca ggt tat cct ctg gca gaa gta tcc tgg 542
 Glu Leu Thr Cys Gln Ala Thr Gly Tyr Pro Leu Ala Glu Val Ser Trp
 140 145 150 155

cca aac gtc agc gtt cct gcc aac acc agc cac tcc agg acc cct gaa 590
 Pro Asn Val Ser Val Pro Ala Asn Thr Ser His Ser Arg Thr Pro Glu
 160 165 170

ggc ctc tac cag gtc acc agt gtt ctg cgc cta aag cca ccc cct ggc 638
 Gly Leu Tyr Gln Val Thr Ser Val Leu Arg Leu Lys Pro Pro Pro Gly
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aga aac ttc agc tgt gtg ttc tgg aat act cac gtg agg gaa ctt act 686
 Arg Asn Phe Ser Cys Val Phe Trp Asn Thr His Val Arg Glu Leu Thr
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ttg gcc agc att gac ctt caa agt cag atg gaa ccc agg acc cat cca 734
 Leu Ala Ser Ile Asp Leu Gln Ser Gln Met Glu Pro Arg Thr His Pro
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 Thr Trp Leu Leu His Ile Phe Ile Pro Ser Cys Ile Ile Ala Phe Ile
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ttc ata gcc aca gtg ata gcc cta aga aaa caa ctc tgt caa aag ctg 830
 Phe Ile Ala Thr Val Ile Ala Leu Arg Lys Gln Leu Cys Gln Lys Leu
 240 245 250

tat tct tca aaa gac aca aca aaa aga cct gtc acc aca aca aag agg 878
 Tyr Ser Ser Lys Asp Thr Thr Lys Arg Pro Val Thr Thr Lys Arg
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gaa gtg aac agt gct atc tgaacctgtg gtcttggag ccagggtgac 926
 Glu Val Asn Ser Ala Ile
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      20          25                  30
Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn Phe Asp Thr Gly Ser
      35          40                  45
His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn
      50          55                  60
Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
      65          70                  75                  80
Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln Val Gln Val Arg Asp
      85          90                  95
Glu Gly Gln Tyr Gln Cys Ile Ile Tyr Gly Val Ala Trp Asp Tyr
      100         105                 110
Lys Tyr Leu Thr Leu Lys Val Lys Ala Ser Tyr Arg Lys Ile Asn Thr
      115         120                 125
His Ile Leu Lys Val Pro Glu Thr Asp Glu Val Glu Leu Thr Cys Gln
      130         135                 140
Ala Thr Gly Tyr Pro Leu Ala Glu Val Ser Trp Pro Asn Val Ser Val
      145         150                 155                  160
Pro Ala Asn Thr Ser His Ser Arg Thr Pro Glu Gly Leu Tyr Gln Val
      165         170                 175
Thr Ser Val Leu Arg Leu Lys Pro Pro Pro Gly Arg Asn Phe Ser Cys
      180         185                 190
Val Phe Trp Asn Thr His Val Arg Glu Leu Thr Leu Ala Ser Ile Asp
      195         200                 205
Leu Gln Ser Gln Met Glu Pro Arg Thr His Pro Thr Trp Leu Leu His

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210	215	220
Ile Phe Ile Pro Ser Cys Ile Ile Ala Phe Ile Phe Ile Ala Thr Val		
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Ile Ala Leu Arg Lys Gln Leu Cys Gln Lys Leu Tyr Ser Ser Lys Asp		
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Met Ile Phe Leu Leu Met Leu Ser Leu Glu Leu Gln Leu
1 5 10

cac cag ata gca gct tta ttc aca gtg aca gtc cct aag gaa ctg tac 159
His Gln Ile Ala Ala Leu Phe Thr Val Thr Val Pro Lys Glu Leu Tyr
15 20 25 30

ata ata gag cat ggc agc aat gtg acc ctg gaa tgc aac ttt gac act 207
Ile Ile Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn Phe Asp Thr
35 40 45

gga agt cat gtg aac ctt gga gca ata aca gcc agt ttg caa aag gtg 255
Gly Ser His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val
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gaa aat gat aca tcc cca cac cgt gaa aga gcc act ttg ctg gag gag 303
Glu Asn Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu
65 70 75

cag ctg ccc cta ggg aag gcc tcg ttc cac ata cct caa gtc caa gtg 351
Gln Leu Pro Leu Gly Lys Ala Ser Phe His Ile Pro Gln Val Gln Val
80 85 90

agg gac gaa gga cag tac caa tgc ata atc atc tat ggg gtc gcc tgg 399
Arg Asp Glu Gly Gln Tyr Gln Cys Ile Ile Tyr Gly Val Ala Trp
95 100 105 110

gac tac aag tac ctg act ctg aaa gtc aaa ggt cag atg gaa ccc agg 447
Asp Tyr Lys Tyr Leu Thr Leu Lys Val Lys Gly Gln Met Glu Pro Arg
115 120 125

acc cat cca act tgg ctg ctt cac att ttc atc ccc tcc tgc atc att		495
Thr His Pro Thr Trp Leu Leu His Ile Phe Ile Pro Ser Cys Ile Ile		
130	135	140
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Gln Lys Leu Tyr Ser Ser Lys Asp Thr Thr Lys Arg Pro Val Thr Thr		
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aca aag agg gaa gtg aac agt gct atc tgaacctgtg gtcttggag		638
Thr Lys Arg Glu Val Asn Ser Ala Ile		
175	180	
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cctgcagagc ttgccatttg cactttcaa atgccttgg atgaccacgc actttaatct	758	
gaaacctgca acaagactag ccaacacctg gccatgaaac ttgccccttc actgatctgg	818	
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ggtaactagaa gaggctattg agactatgag ctcacagaca gggcttcgca caaactcaaa	1118	
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<211> 183

<212> PRT

<213> Homo sapiens

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20	25	30	
Glu His Gly Ser Asn Val Thr Leu Glu Cys Asn Phe Asp Thr Gly Ser			
35	40	45	
His Val Asn Leu Gly Ala Ile Thr Ala Ser Leu Gln Lys Val Glu Asn			
50	55	60	
Asp Thr Ser Pro His Arg Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu			
65	70	75	80

Pro	Leu	Gly	Lys	Ala	Ser	Phe	His	Ile	Pro	Gln	Val	Gln	Val	Arg	Asp
						85				90				95	
Glu	Gly	Gln	Tyr	Gln	Cys	Ile	Ile	Ile	Tyr	Gly	Val	Ala	Trp	Asp	Tyr
						100			105				110		
Lys	Tyr	Leu	Thr	Leu	Lys	Val	Lys	Gly	Gln	Met	Glu	Pro	Arg	Thr	His
						115			120			125			
Pro	Thr	Trp	Leu	Leu	His	Ile	Phe	Ile	Pro	Ser	Cys	Ile	Ile	Ala	Phe
						130			135			140			
Ile	Phe	Ile	Ala	Thr	Val	Ile	Ala	Leu	Arg	Lys	Gln	Leu	Cys	Gln	Lys
						145			150			155			160
Leu	Tyr	Ser	Ser	Lys	Asp	Thr	Thr	Lys	Arg	Pro	Val	Thr	Thr	Thr	Lys
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 <213> Homo sapiens

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Ser	Gly	Val	Ile	His	Val	Thr	Lys	Glu	Val	Lys	Glu	Val	Ala	Thr	Leu
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Ser	Cys	Gly	His	Asn	Val	Ser	Val	Glu	Glu	Leu	Ala	Gln	Thr	Arg	Ile
						50			55			60			
Tyr	Trp	Gln	Lys	Glu	Lys	Lys	Met	Val	Leu	Thr	Met	Met	Ser	Gly	Asp
						65			70			75		80	
Met	Asn	Ile	Trp	Pro	Glu	Tyr	Lys	Asn	Arg	Thr	Ile	Phe	Asp	Ile	Thr
						85			90			95			
Asn	Asn	Leu	Ser	Ile	Val	Ile	Leu	Ala	Leu	Arg	Pro	Ser	Asp	Glu	Gly
						100			105			110			
Thr	Tyr	Glu	Cys	Val	Val	Leu	Lys	Tyr	Glu	Lys	Asp	Ala	Phe	Lys	Arg
						115			120			125			
Glu	His	Leu	Ala	Glu	Val	Thr	Leu	Ser	Val	Lys	Ala	Asp	Phe	Pro	Thr
						130			135			140			
Pro	Ser	Ile	Ser	Asp	Phe	Glu	Ile	Pro	Thr	Ser	Asn	Ile	Arg	Arg	Ile
						145			150			155		160	
Ile	Cys	Ser	Thr	Ser	Gly	Gly	Phe	Pro	Glu	Pro	His	Léu	Ser	Trp	Leu
						165			170			175			
Glu	Asn	Gly	Glu	Glu	Leu	Asn	Ala	Ile	Asn	Thr	Thr	Val	Ser	Gln	Asp
						180			185			190			
Pro	Glu	Thr	Glu	Leu	Tyr	Ala	Val	Ser	Ser	Lys	Leu	Asp	Phe	Asn	Met
						195			200			205			
Thr	Thr	Asn	His	Ser	Phe	Met	Cys	Leu	Ile	Lys	Tyr	Gly	His	Leu	Arg
						210			215			220			
Val	Asn	Gln	Thr	Phe	Asn	Trp	Asn	Thr	Thr	Lys	Gln	Glu	His	Phe	Pro
						225			230			235		240	
Asp	Asn	Leu	Leu	Pro	Ser	Trp	Ala	Ile	Thr	Leu	Ile	Ser	Val	Asn	Gly
						245			250			255			
Ile	Phe	Val	Ile	Cys	Cys	Leu	Thr	Tyr	Cys	Phe	Ala	Pro	Arg	Cys	Arg
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Glu	Arg	Arg	Arg	Asn	Glu	Arg	Leu	Arg	Arg	Glu	Ser	Val	Arg	Pro	Val

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<213> Homo sapiens

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Pro Cys Gln Phe Ala Asn Ser Gln Asn Gln Ser Leu Ser Glu Leu Val
35 40 45
Val Phe Trp Gln Asp Gln Glu Asn Leu Val Leu Asn Glu Val Tyr Leu
50 55 60
Gly Lys Glu Lys Phe Asp Ser Val His Ser Lys Tyr Met Gly Arg Thr
65 70 75 80
Ser Phe Asp Ser Asp Ser Trp Thr Leu Arg Leu His Asn Leu Gln Ile
85 90 95
Lys Asp Lys Gly Leu Tyr Gln Cys Ile Ile His His Lys Lys Pro Thr
100 105 110
Gly Met Ile Arg Ile His Gln Met Asn Ser Glu Leu Ser Val Leu Ala
115 120 125
Asn Phe Ser Gln Pro Glu Ile Val Pro Ile Ser Asn Ile Thr Glu Asn
130 ~135 140
Val Tyr Ile Asn Leu Thr Cys Ser Ser Ile His Gly Tyr Pro Glu Pro
145 150 155 160
Lys Lys Met Ser Val Leu Leu Arg Thr Lys Asn Ser Thr Ile Glu Tyr
165 170 175
Asp Gly Ile Met Gln Lys Ser-Gln Asp Asn Val Thr Glu Leu Tyr Asp
180 185 190
Val Ser Ile Ser Leu Ser Val Ser Phe Pro Asp Val Thr Ser Asn Met
195 200 205
Thr Ile Phe Cys Ile Leu Glu Thr Asp Lys Thr Arg Leu Leu Ser Ser
210 215 220
Pro Phe Ser Ile Glu Leu Glu Asp Pro Gln Pro Pro Pro Asp His Ile
225 230 235 240
Pro Trp Ile Thr Ala Val Leu Pro Thr Val Ile Ile Cys Val Met Val
245 250 255
Phe Pro Cys Leu Ile Leu Trp Lys Trp Lys Lys Lys Arg Pro Arg
260 265 270
Asn Ser Tyr Lys Cys Gly Thr Asn Thr Met Glu Arg Glu Ser Glu
275 280 285
Gln Thr Lys Lys Arg Glu Lys Ile His Ile Pro Glu Arg Ser Asp Glu
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Ala Gln Arg Val Phe Lys Ser Ser Lys Thr Ser Ser Cys Asp Lys Ser
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Asp Thr Cys Phe

<210> 7
<211> 309
<212> PRT
<213> Homo sapiens

<400> 7

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Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn
35 40 45
Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr
50 55 60
Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr
65 70 75 80
Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe
85 90 95
Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His
100 105 110
Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val
115 120 125
Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser
130 135 140
Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser
145 150 155 160
Ile Asn Gly Tyr Pro Arg Pro Asn Val Tyr Trp Ile Asn Lys Thr Asp
165 170 175
Asn Ser Leu Leu Asp Gln Ala Leu Gln Asn Asp Thr Val Phe Leu Asn
180 185 190
Met Arg Gly Leu Tyr Asp Val Val Ser Val Leu Arg Ile Ala Arg Thr
195 200 205
Pro Ser Val Asn Ile Gly Cys Cys Ile Glu Asn Val Leu Leu Gln Gln
210 215 220
Asn Leu Thr Val Gly Ser Gln Thr Gly Asn Asp Ile Gly Glu Arg Asp
225 230 235 240
Lys Ile Thr Glu Asn Pro Val Ser Thr Gly Glu Lys Asn Ala Ala Thr
245 250 255
Trp Ser Ile Leu Ala Val Leu Cys Leu Leu Val Val Ala Val Ala
260 265 270
Ile Gly Trp Val Cys Arg Asp Arg Cys Leu Gln His Ser Tyr Ala Gly
275 280 285
Ala Trp Ala Val Ser Pro Glu Thr Glu Leu Thr Glu Ser Trp Asn Leu
290 295 300
Leu Leu Leu Leu Ser
305

<210> 8

<211> 290

<212> PRT

<213> Homo sapiens

<400> 8

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Gly Ser Asn Met Thr Ile Glu Cys Lys Phe Pro Val Glu Lys Gln Leu
35 40 45
Asp Leu Ala Ala Leu Ile Val Tyr Trp Glu Met Glu Asp Lys Asn Ile

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Ile Gln Phe Val His Gly Glu Glu Asp Leu Lys Val Gln His Ser Ser		
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Tyr Arg Gln Arg Ala Arg Leu Leu Lys Asp Gln Leu Ser Leu Gly Asn		80
	85	90
Ala Ala Leu Gln Ile Thr Asp Val Lys Leu Gln Asp Ala Gly Val Tyr		
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Arg Cys Met Ile Ser Tyr Gly Gly Ala Asp Tyr Lys Arg Ile Thr Val		110
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Lys Val Asn Ala Pro Tyr Asn Lys Ile Asn Gln Arg Ile Leu Val Val		
	130	135
Asp Pro Val Thr Ser Glu His Glu Leu Thr Cys Gln Ala Glu Gly Tyr		
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Pro Lys Ala Glu Val Ile Trp Thr Ser Ser Asp His Gln Val Leu Ser		155
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Gly Lys Thr Thr Thr Asn Ser Lys Arg Glu Glu Lys Leu Phe Asn		
	180	185
Val Thr Ser Thr Leu Arg Ile Asn Thr Thr Thr Asn Glu Ile Phe Tyr		190
	195	200
Cys Thr Phe Arg Arg Leu Asp Pro Glu Glu Asn His Thr Ala Glu Leu		
	210	215
Val Ile Pro Glu Leu Pro Leu Ala His Pro Pro Asn Glu Arg Thr His		
	225	230
Leu Val Ile Leu Gly Ala Ile Leu Leu Cys Leu Gly Val Ala Leu Thr		
	245	250
Phe Ile Phe Arg Leu Arg Lys Gly Arg Met Met Asp Val Lys Lys Cys		
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Gly Ile Gln Asp Thr Asn Ser Lys Lys Gln Ser Asp Thr His Leu Glu		
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Glu Thr		285
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	20	25
Gly Pro Pro Glu Pro Ile Leu Ala Val Val Gly Glu Asp Ala Glu Leu		
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Pro Cys Arg Leu Ser Pro Asn Ala Ser Ala Glu His Leu Glu Leu Arg		
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Trp Phe Arg Lys Lys Val Ser Pro Ala Val Leu Val His Arg Asp Gly		60
	65	70
Arg Glu Gln Glu Ala Glu Gln Met Pro Glu Tyr Arg Gly Arg Ala Thr		80
	85	90
Leu Val Gln Asp Gly Ile Ala Lys Gly Arg Val Ala Leu Arg Ile Arg		95
	100	105
Gly Val Arg Val Ser Asp Asp Gly Glu Tyr Thr Cys Phe Phe Arg Glu		
	115	120
Asp Gly Ser Tyr Glu Glu Ala Leu Val His Leu Lys Val Ala Ala Leu		
	130	135
		140

Gly Ser Asp Pro His Ile Ser Met Gln Val Gln Glu Asn Gly Glu Ile
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 Cys Leu Glu Cys Thr Ser Val Gly Trp Tyr Pro Glu Pro Gln Val Gln
 165 170 175
 Trp Arg Thr Ser Lys Gly Glu Lys Phe Pro Ser Thr Ser Glu Ser Arg
 180 185 190
 Asn Pro Asp Glu Glu Gly Leu Phe Thr Val Ala Ala Ser Val Ile Ile
 195 200 205
 Arg Asp Thr Ser Thr Lys Asn Val Ser Cys Tyr Ile Gln Asn Leu Leu
 210 215 220
 Leu Gly Gln Glu Lys Lys Val Glu Ile Ser Ile Pro Ala Ser Ser Leu
 225 230 235 240
 Pro Arg Leu Thr Pro Trp Ile Val Ala Val Ala Val Ile Leu Met Val
 245 250 255
 Leu Gly Leu Leu Thr Ile Gly Ser Ile Phe Phe Thr Trp Arg Leu Tyr
 260 265 270
 Asn Glu Arg Pro Arg Glu Arg Arg Asn Glu Phe Ser Ser Lys Glu Arg
 275 280 285
 Leu Leu Glu Glu Leu Lys Trp Lys Lys Ala Thr Leu His Ala Val Asp
 290 295 300
 Val Thr Leu Asp Pro Asp Thr Ala His Pro His Leu Phe Leu Tyr Glu
 305 310 315 320
 Asp Ser Lys Ser Val Arg Leu Glu Asp Ser Arg Gln Lys Leu Pro Glu
 325 330 335
 Lys Thr Glu Arg Phe Asp Ser Trp Pro Cys Val Leu Gly Arg Glu Thr
 340 345 350
 Phe Thr Ser Gly Arg His Tyr Trp Glu Val Glu Val Gly Asp Arg Thr
 355 360 365
 Asp Trp Ala Ile Gly Val Cys Arg Glu Asn Val Met Lys Lys Gly Phe
 370 375 380
 Asp Pro Met Thr Pro Glu Asn Gly Phe Trp Ala Val Glu Leu Tyr Glu
 385 390 395 400
 Asn Gly Tyr Trp Ala Leu Thr Pro Leu Arg Thr Pro Leu Pro Leu Ala
 405 410 415
 Gly Pro Pro Arg Arg Val Gly Ile Phe Leu Asp Tyr Glu Ser Gly Asp
 420 425 430
 Ile Ser Phe Tyr Asn Met Asn Asp Gly Ser Asp Ile Tyr Thr Phe Ser
 435 440 445
 Asn Val Thr Phe Ser Gly Pro Leu Arg Pro Phe Phe Cys Leu Trp Ser
 450 455 460
 Ser Gly Lys Lys Pro Leu Thr Ile Cys Pro Ile Ala Asp Gly Pro Glu
 465 470 475 480
 Arg Val Thr Val Ile Ala Asn Ala Gln Asp Leu Ser Lys Glu Ile Pro
 485 490 495
 Leu Ser Pro Met Gly Glu Glu Ser Ala Pro Arg Asp Ala Asp Thr Leu
 500 505 510
 His Ser Lys Leu Ile Pro Thr Gln Pro Ser Gln Gly Ala Pro
 515 520 525

<210> 10
 <211> 527
 <212> PRT
 <213> Homo sapiens

<400> 10
 Met Glu Ser Ala Ala Ala Leu His Phe Ser Arg Pro Ala Ser Leu Leu

1	5	10	15
Leu	Leu	Leu	Leu
Ser	Leu	Cys	Ala
Leu	Val	Ser	Ala
Cln	Phe	Ile	Val
20	25	30	
Val	Gly	Pro	Thr
Asp	Pro	Ile	Leu
Ala	Thr	Val	Gly
Glu	Asn	Thr	Thr
35	40	45	
Leu	Arg	Cys	His
Leu	Ser	Pro	Glu
Lys	Asn	Ala	Glu
Asp	Met	Glu	Val
50	55	60	
Arg	Trp	Phe	Arg
Ser	Gln	Phe	Ser
Pro	Ala	Val	Phe
Val	Tyr	Lys	Gly
65	70	75	80
Gly	Arg	Glu	Arg
Thr	Glu	Gln	Met
Glu	Glu	Tyr	Arg
Arg	Gly	Arg	Thr
85	90	95	
Thr	Phe	Val	Ser
Lys	Asp	Ile	Ser
Arg	Gly	Ser	Val
Val	Ala	Leu	Ile
100	105	110	
His	Asn	Ile	Thr
Ala	Gln	Glu	Asn
Gly	Thr	Tyr	Arg
Cys	Tyr	Phe	Gln
115	120	125	
Glu	Gly	Arg	Ser
Tyr	Asp	Glu	Ala
Ile	Leu	His	Leu
Val	Val	Val	Ala
Gly	130	135	140
Leu	Gly	Ser	Lys
Pro	Leu	Ile	Ser
Met	Arg	Gly	His
Glu	Asp	Gly	Gly
145	150	155	160
Ile	Arg	Leu	Glu
Cys	Ile	Ser	Arg
Gly	Trp	Tyr	Pro
Tyr	Pro	Lys	Pro
Leu	Thr	165	175
Val	Trp	Arg	Asp
Pro	Tyr	Gly	Gly
Val	Ala	Pro	Ala
Leu	Lys	Glu	Val
180	185	190	
Ser	Met	Pro	Asp
Ala	Asp	Gly	Leu
Phe	Met	Val	Thr
Thr	Ala	Val	Ile
195	200	205	
Ile	Arg	Asp	Lys
Ser	Val	Arg	Asn
Met	Ser	Cys	Ser
Ile	Asn	Asn	Thr
210	215	220	
Leu	Leu	Gly	Gln
Lys	Lys	Glu	Ser
Val	Ile	Phe	Ile
225	230	235	240
Met	Pro	Ser	Val
Ser	Pro	Cys	Ala
Val	Ala	Leu	Pro
Ile	Ile	Ile	Val
245	250	255	
Ile	Leu	Met	Ile
Pro	Ile	Ala	Val
Cys	Ile	Tyr	Trp
Ile	Asn	Lys	Leu
260	265	270	
Gln	Lys	Glu	Lys
Ile	Leu	Ser	Gly
Glu	Lys	Glu	Lys
275	280	285	
Thr	Arg	Glu	Ile
Ile	Ala	Leu	Lys
Glu	Lys	Glu	Lys
290	295	300	
Glu	Glu	Leu	Gln
305	310	315	320
Arg	Arg	Thr	Phe
Leu	His	Ala	Val
Asp	Val	Val	Leu
325	330	335	
Ala	His	Pro	Asp
Leu	Phe	Leu	Ser
Glu	Asp	Arg	Arg
340	345	350	
Cys	Pro	Phe	Arg
His	Leu	Gly	Glu
355	360	365	
Phe	Asp	Ser	Gln
370	375	380	
Lys	His	Tyr	Trp
Glu	Val	Glu	Val
385	390	395	400
Gly	Val	Cys	Arg
Asp	Ser	Val	Glu
Arg	405	410	415
Pro	Gln	Asn	Gly
Phe	Trp	Thr	Leu
420	425	430	
Ala	Val	Ser	Ser
Pro	Asp	Arg	Ile
435	440	445	
Arg	Val	Gly	Val
Phe	Leu	Asp	Tyr
450	455	460	

Asn	Met	Arg	Asp	Arg	Ser	His	Ile	Tyr	Thr	Cys	Pro	Arg	Ser	Ala	Phe
465					470					475					480
Ser	Val	Pro	Val	Arg	Pro	Phe	Phe	Arg	Leu	Gly	Cys	Glu	Asp	Ser	Pro
					485				490						495
Ile	Phe	Ile	Cys	Pro	Ala	Leu	Thr	Gly	Ala	Asn	Gly	Val	Thr	Val	Pro
					500				505						510
Glu	Glu	Gly	Leu	Thr	Leu	His	Arg	Val	Gly	Thr	His	Gln	Ser	Leu	
					515			520							525

<210> 11
<211> 523
<212> PRT
<213> Homo sapiens

<400>	11														
Met	Glu	Pro	Ala	Ala	Ala	Leu	His	Phe	Ser	Leu	Pro	Ala	Ser	Leu	Leu
1					5				10						15
Leu	Leu	Leu	Leu	Leu	Leu	Leu	Ser	Leu	Cys	Ala	Leu	Val	Ser	Ala	
									20		25				30
Gln	Phe	Thr	Val	Val	Gly	Pro	Ala	Asn	Pro	Ile	Leu	Ala	Met	Val	Gly
					35				40						45
Glu	Asn	Thr	Thr	Leu	Arg	Cys	His	Leu	Ser	Pro	Glu	Lys	Asn	Ala	Glu
					50				55						60
Asp	Met	Glu	Val	Arg	Trp	Phe	Arg	Ser	Gln	Phe	Ser	Pro	Ala	Val	Phe
	65					70				75					80
Val	Tyr	Lys	Gly	Gly	Arg	Glu	Arg	Thr	Glu	Glu	Gln	Met	Glu	Glu	Tyr
						85				90					95
Arg	Gly	Arg	Ile	Thr	Phe	Val	Ser	Lys	Asp	Ile	Asn	Arg	Gly	Ser	Val
					100				105						110
Ala	Leu	Val	Ile	His	Asn	Val	Thr	Ala	Gln	Glu	Asn	Gly	Ile	Tyr	Arg
					115				120						125
Cys	Tyr	Phe	Gln	Glu	Gly	Arg	Ser	Tyr	Asp	Glu	Ala	Ile	Leu	Arg	Leu
					130				135						140
Val	Val	Ala	Gly	Leu	Gly	Ser	Lys	Pro	Leu	Ile	Glu	Ile	Lys	Ala	Gln
	145					150					155				160
Glu	Asp	Gly	Ser	Ile	Trp	Leu	Glu	Cys	Ile	Ser	Gly	Gly	Trp	Tyr	Pro
					165					170					175
Glu	Pro	Leu	Thr	Val	Trp	Arg	Asp	Pro	Tyr	Gly	Glu	Val	Val	Pro	Ala
					180				185						190
Leu	Lys	Glu	Val	Ser	Ile	Ala	Asp	Ala	Asp	Gly	Leu	Phe	Met	Val	Thr
					195				200						205
Thr	Ala	Val	Ile	Ile	Arg	Asp	Lys	Tyr	Val	Arg	Asn	Val	Ser	Cys	Ser
					210				215						220
Val	Asn	Asn	Thr	Leu	Leu	Gly	Gln	Glu	Lys	Glu	Thr	Val	Ile	Phe	Ile
	225					230					235				240
Pro	Glu	Ser	Phe	Met	Pro	Ser	Ala	Ser	Pro	Trp	Met	Val	Ala	Leu	Ala
					245					250					255
Val	Ile	Leu	Thr	Ala	Ser	Pro	Trp	Met	Val	Ser	Met	Thr	Val	Ile	Leu
					260				265						270
Ala	Val	Phe	Ile	Ile	Phe	Met	Ala	Val	Ser	Ile	Cys	Cys	Ile	Lys	Lys
					275				280						285
Leu	Gln	Arg	Glu	Lys	Lys	Ile	Leu	Ser	Gly	Glu	Lys	Lys	Val	Glu	Gln
					290				295						300
Glu	Glu	Lys	Glu	Ile	Ala	Gln	Gln	Leu	Gln	Glu	Glu	Leu	Arg	Trp	Arg
	305					310					315				320
Arg	Thr	Phe	Leu	His	Ala	Ala	Asp	Val	Val	Leu	Asp	Pro	Asp	Thr	Ala

	325	330	335
His Pro Glu Leu Phe Leu Ser Glu Asp Arg Arg Ser Val Arg Arg Gly			
340	345	350	
Pro Tyr Arg Gln Arg Val Pro Asp Asn Pro Glu Arg Phe Asp Ser Gln			
355	360	365	
Pro Cys Val Leu Gly Trp Glu Ser Phe Ala Ser Gly Lys His Tyr Trp			
370	375	380	
Glu Val Glu Val Glu Asn Val Met Val Trp Thr Val Gly Val Cys Arg			
385	390	395	400
His Ser Val Glu Arg Lys Gly Glu Val Leu Leu Ile Pro Gln Asn Gly			
405	410	415	
Phe Trp Thr Leu Glu Met Phe Gly Asn Gln Tyr Arg Ala Leu Ser Ser			
420	425	430	
Pro Glu Arg Ile Leu Pro Leu Lys Glu Ser Leu Cys Arg Val Gly Val			
435	440	445	
Phe Leu Asp Tyr Glu Ala Gly Asp Val Ser Phe Tyr Asn Met Arg Asp			
450	455	460	
Arg Ser His Ile Tyr Thr Cys Pro Arg Ser Ala Phe Thr Val Pro Val			
465	470	475	480
Arg Pro Phe Phe Arg Leu Gly Ser Asp Asp Ser Pro Ile Phe Ile Cys			
485	490	495	
Pro Ala Leu Thr Gly Ala Ser Gly Val Met Val Pro Glu Glu Gly Leu			
500	505	510	
Lys Leu His Arg Val Gly Thr His Gln Ser Leu			
515	520		

<210> 12
<211> 319
<212> PRT
<213> Homo sapiens

<400> 12			
Met Lys Met Ala Ser Ser Leu Ala Phe Leu Leu Leu Asn Phe His Val			
1	5	10	15
Ser Leu Leu Leu Val Gln Leu Leu Thr Pro Cys Ser Ala Gln Phe Ser			
20	25	30	
Val Leu Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala			
35	40	45	
Asp Leu Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu			
50	55	60	
Leu Lys Trp Val Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala			
65	70	75	80
Asp Gly Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg			
85	90	95	
Thr Ser Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Leu Arg			
100	105	110	
Ile His Asn Val Thr Ala Ser Asp Ser Gly Lys Tyr Leu Cys Tyr Phe			
115	120	125	
Gln Asp Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala			
130	135	140	
Ala Leu Gly Ser Asn Leu His Val Glu Val Lys Gly Tyr Glu Asp Gly			
145	150	155	160
Gly Ile His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln			
165	170	175	
Ile Gln Trp Ser Asn Ala Lys Gly Glu Asn Ile Pro Ala Val Glu Ala			
180	185	190	

Pro Val Val Ala Asp Gly Val Gly Leu Tyr Glu Val Ala Ala Ser Val
 195 200 205
 Ile Met Arg Gly Gly Ser Gly Glu Gly Val Ser Cys Ile Ile Arg Asn
 210 215 220
 Ser Leu Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Asp Pro
 225 230 235 240
 Phe Phe Arg Ser Ala Gln Pro Trp Ile Ala Ala Leu Ala Gly Thr Leu
 245 250 255
 Pro Ile Leu Leu Leu Leu Ala Gly Ala Ser Tyr Phe Leu Trp Arg
 260 265 270
 Gln Gln Lys Glu Ile Thr Ala Leu Ser Ser Glu Ile Glu Ser Glu Gln
 275 280 285
 Glu Met Lys Glu Met Gly Tyr Ala Ala Thr Glu Arg Glu Ile Ser Leu
 290 295 300
 Arg Glu Ser Leu Gln Glu Glu Leu Lys Arg Lys Lys Ser Ser Thr
 305 310 315

<210> 13
 <211> 529
 <212> PRT
 <213> Homo sapiens

<400> 13
 Met Glu Ser Ala Ala Ala Leu His Phe Ser Arg Pro Ala Ser Leu Leu
 1 5 10 15
 Leu Leu Leu Leu Ser Leu Cys Ala Leu Val Ser Ala His Phe Ile Val
 20 25 30
 Val Gly Pro Thr Asp Pro Ile Leu Ala Thr Val Gly Glu Asn Thr Thr
 35 40 45
 Leu Arg Cys His Leu Ser Pro Glu Lys Asn Ala Glu Asp Met Glu Val
 50 55 60
 Arg Trp Phe Arg Ser Gln Phe Ser Pro Ala Val Phe Val Tyr Lys Gly
 65 70 75 80
 Gly Arg Glu Arg Thr Glu Glu Gln Met Glu Glu Tyr Arg Gly Arg Thr
 85 90 95
 Thr Phe Val Ser Lys Asp Ile Ser Arg Gly Ser Val Ala Leu Val Ile
 100 105 110
 His Asn Ile Thr Ala Gln Gly Asn Gly Thr Tyr Arg Cys Tyr Phe Gln
 115 120 125
 Glu Gly Arg Ser Tyr Asp Glu Ala Ile Leu His Leu Val Val Ala Glu
 130 135 140
 Arg Leu Gly Ser Lys Pro Leu Ile Ser Met Arg Gly His Glu Asp Gly
 145 150 155 160
 Gly Ile Arg Leu Glu Cys Ile Ser Arg Gly Trp Tyr Pro Lys Pro Leu
 165 170 175
 Thr Val Trp Arg Asp Pro Tyr Gly Gly Val Ala Pro Ala Leu Lys Glu
 180 185 190
 Val Ser Met Pro Asp Ala Asp Gly Leu Phe Met Val Thr Thr Ala Val
 195 200 205
 Ile Ile Arg Asp Lys Ser Val Arg Asn Met Ser Cys Ser Ile Asn Asn
 210 215 220
 Thr Leu Leu Gly Gln Lys Lys Glu Ser Val Ile Phe Ile Pro Glu Ser
 225 230 235 240
 Phe Met Pro Ser Val Ser Pro Leu Ala Val Cys Ile Tyr Trp Ile Asn
 245 250 255
 Lys Leu Gln Lys Glu Lys Lys Ile Leu Ser Gly Glu Lys Glu Phe Glu

	260	265	270
Arg Glu Thr Arg Glu Ile Ala Leu Lys Glu Leu Glu Lys Glu Arg Val			
275	280	285	
Gln Lys Glu Glu Glu Leu Gln Val Lys Glu Lys Leu Gln Glu Glu Leu			
290	295	300	
Arg Trp Arg Arg Thr Phe Leu His Ala Val Asp Val Val Leu Asp Pro			
305	310	315	320
Asp Thr Ala His Pro Asp Leu Phe Leu Ser Glu Asp Arg Arg Ser Val			
325	330	335	
Arg Arg Cys Pro Phe Arg His Leu Gly Glu Ser Val Pro Asp Asn Pro			
340	345	350	
Glu Arg Phe Asp Ser Gln Pro Cys Val Leu Gly Arg Glu Ser Phe Ala			
355	360	365	
Ser Gly Lys His Tyr Trp Glu Val Glu Val Glu Asn Val Ile Glu Trp			
370	375	380	
Thr Val Gly Val Cys Arg Asp Ser Val Glu Arg Lys Gly Glu Val Leu			
385	390	395	400
Leu Ile Pro Gln Asn Gly Phe Trp Thr Leu Glu Met His Lys Gln			
405	410	415	
Tyr Arg Ala Val Ser Ser Pro Asp Arg Ile Leu Pro Leu Lys Glu Ser			
420	425	430	
Leu Cys Arg Val Gly Val Phe Leu Asp Tyr Glu Ala Gly Asp Val Ser			
435	440	445	
Phe Tyr Asn Met Arg Asp Arg Ser His Ile Tyr Thr Cys Pro Arg Ser			
450	455	460	
Ala Phe Ser Gly Pro Asp Thr Ser Gln Ser Gly Asp Pro Pro Glu Pro			
465	470	475	480
Ile Glu Ser Ile Pro Trp Ser His Ser His Val Asp Lys Pro Trp Ser			
485	490	495	
Phe Gln Gln Pro Pro His Asn Thr His Leu Pro Ala Ala Ser Phe Thr			
500	505	510	
Pro Thr Thr Asp Leu Ser Pro Ser Phe Leu Leu Leu Thr Arg Leu Cys			
515	520	525	
Phe			

<210> 14
<211> 357
<212> PRT
<213> Homo sapiens

<400> 14

Met Ala Ser Ser Leu Ala Phe Leu Leu Leu Asn Phe His Val Ser Leu			
1	5	10	15
Leu Leu Val Gln Leu Leu Thr Pro Cys Ser Ala Gln Phe Ser Val Leu			
20	25	30	
Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu			
35	40	45	
Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Lys			
50	55	60	
Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly			
65	70	75	80
Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser			
85	90	95	
Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Leu Arg Ile His			
100	105	110	

Asn Val Thr Ala Ser Asp Ser Gly Lys Tyr Leu Cys Tyr Phe Gln Asp
 115 120 125
 Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala Ala Leu
 130 135 140
 Gly Ser Asn Leu His Val Glu Val Lys Gly Tyr Glu Asp Gly Gly Ile
 145 150 155 160
 His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Gln
 165 170 175
 Trp Ser Asn Ala Lys Gly Glu Asn Ile Pro Ala Val Glu Ala Pro Val
 180 185 190
 Val Ala Asp Gly Val Gly Leu Tyr Glu Val Ala Ala Ser Val Ile Met
 195 200 205
 Arg Gly Gly Ser Gly Glu Gly Val Ser Cys Ile Ile Arg Asn Ser Leu
 210 215 220
 Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Asp Pro Phe Phe
 225 230 235 240
 Arg Ser Ala Gln Pro Trp Ile Ala Ala Leu Ala Gly Thr Leu Pro Ile
 245 250 255
 Leu Leu Leu Leu Ala Gly Ala Ser Tyr Phe Leu Trp Arg Gln Gln
 260 265 270
 Lys Glu Ile Thr Ala Leu Ser Ser Glu Ile Glu Ser Glu Gln Glu Met
 275 280 285
 Lys Glu Met Gly Tyr Ala Ala Thr Glu Arg Glu Ile Ser Leu Arg Glu
 290 295 300
 Ser Leu Gln Glu Glu Leu Lys Arg Lys Lys Ile Gln Tyr Leu Thr Arg
 305 310 315 320
 Gly Glu Glu Ser Leu Ser Asp Thr Asn Lys Ser Ala Leu Met Leu Lys
 325 330 335
 Trp Lys Lys Ala Leu Phe Lys Pro Gly Glu Glu Met Leu Gln Met Arg
 340 345 350
 Leu His Leu Val Lys
 355

<210> 15
 <211> 731
 <212> PRT
 <213> Homo sapiens

<220>

<221> VARIANT
 <222> 248, 249, 250, 254, 261, 264, 280, 299, 400, 411, 429
 <223> Xaa = Any Amino Acid

<400> 15
 Met Ala Ser Ser Leu Ala Phe Leu Leu Leu Asn Phe His Val Ser Leu
 1 5 10 15
 Phe Leu Val Gln Leu Leu Thr Pro Cys Ser Ala Gln Phe Ser Val Leu
 20 25 30
 Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu
 35 40 45
 Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Arg
 50 55 60
 Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly
 65 70 75 80
 Lys Glu Val Glu Tyr Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser

	85	90	95
Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Leu Arg Ile His			
100	105	110	
Asn Val Thr Ala Ser Asp Ser Gly Lys Tyr Leu Cys Tyr Phe Gln His			
115	120	125	
Gly Asp Phe Tyr Glu Lys Ala Pro Val Glu Leu Lys Val Ala Ala Leu			
130	135	140	
Gly Ser Asp Leu His Ile Glu Val Lys Gly Tyr Asp Asp Gly Gly Ile			
145	150	155	160
His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Asn			
165	170	175	
Trp Ser Asp Ser Lys Gly Glu Asn Ile Pro Ala Val Glu Gly Pro Val			
180	185	190	
Asn Val Tyr Gly Val Gly Leu Tyr Ala Val Pro Pro Pro Val Ile Met			
195	200	205	
Thr Gly Thr Ser Gly Gly Val Ser Cys Ile Ile Thr Asn Ser Leu			
210	215	220	
Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Asp Pro Phe Ile			
225	230	235	240
Gln Gly Gly Ala Pro Ala Arg Xaa Xaa Xaa Gly Pro Gly Xaa Gly Thr			
245	250	255	
Leu Ala Tyr Phe Xaa Val Ala Xaa Ser Trp Gln Gly Ala Ser Tyr Phe			
260	265	270	
Leu Trp Arg Gln Gln Lys Glu Xaa Ile Gly Leu Ser Arg Glu Thr Glu			
275	280	285	
Arg Glu Arg Glu Met Lys Glu Met Gly Tyr Xaa Ala Thr Glu Gln Glu			
290	295	300	
Ile Ser Ala Lys Arg Ser Leu Gln Glu Glu Leu Lys Trp Arg Lys Ile			
305	310	315	320
Gln Tyr Met Ala Arg Gly Glu Glu Ser Ser Asp Thr Lys Lys Ser			
325	330	335	
Ala Leu Met Leu Lys Trp Lys Lys Ala Leu Phe Lys Pro Gly Asp Lys			
340	345	350	
Met Leu Gln Met Arg Val Ser Pro Cys Lys Ile Asn Trp Met Tyr Ser			
355	360	365	
Lys Ile Tyr Cys Arg Lys Gly Glu Leu Ile Lys Phe Ile Ser Gly Arg			
370	375	380	
Val Lys Ile Glu Asn Lys Pro Leu Ser Ile Lys His Gln Trp Ala Xaa			
385	390	395	400
Ser Met Trp Gly Lys Gln Gln Lys Cys Xaa Lys Arg Ile Leu Val			
405	410	415	
Ala Ser Trp Gly Arg Ile Arg Val Leu Gly Lys Ala Xaa Thr Asp Leu			
420	425	430	
Thr Phe Ile Ser Pro Leu Val Thr Arg Pro Leu Gly Leu Ser Pro Met			
435	440	445	
Thr Leu Met Arg Glu Ser His Ser Gly Gln Ala Arg Asp Thr Gly Phe			
450	455	460	
Trp Lys Asp Leu Leu Ser Met Ala Gln Ala Leu His Ala Val Ala Leu			
465	470	475	480
Lys Ser Arg Lys Asn Gly Arg Pro His Gly His Leu Leu Lys Leu Ser			
485	490	495	
Ala Ala Asp Val Ile Leu Tyr Pro Asp Met Ala Asn Ala Ile Leu Leu			
500	505	510	
Val Ser Glu Asp Gln Arg Ser Val Gln Arg Ala Glu Glu Pro His Asp			
515	520	525	
Leu Pro Asp Asn Pro Glu Arg Phe Glu Trp Arg Tyr Cys Val Leu Gly			
530	535	540	

Cys Glu Ser Phe Met Ser Glu Arg His Tyr Trp Glu Val Glu Val Gly
 545 550 555 560
 Asp Arg Lys Glu Trp His Ile Gly Val Cys Ser Lys Asn Val Glu Arg
 565 570 575
 Lys Lys Val Trp Val Lys Met Thr Pro Glu Asn Gly Tyr Trp Thr Met
 580 585 590
 Gly Leu Thr Asp Gly Asn Lys Tyr Arg Ala Leu Thr Glu Pro Arg Thr
 595 600 605
 Asn Leu Lys Leu Pro Glu Pro Pro Arg Lys Val Gly Val Ile Leu Asp
 610 615 620
 Tyr Glu Thr Gly His Ile Ser Phe Tyr Asn Ala Thr Asp Gly Ser His
 625 630 635 640
 Ile Tyr Thr Phe Leu His Ala Ser Ser Ser Glu Pro Leu Tyr Pro Val
 645 650 655
 Phe Arg Ile Leu Thr Leu Glu Pro Thr Ala Leu Thr Val Cys Pro Ile
 660 665 670
 Pro Lys Val Glu Ser Ser Pro Asp Pro Asp Leu Val Pro Asp His Ser
 675 680 685
 Leu Glu Ile Pro Leu Thr Pro Gly Leu Ala Asn Glu Ser Gly Glu Pro
 690 695 700
 Gln Ala Glu Val Thr Ser Leu Leu Pro Ala Gln Pro Gly Ala Lys
 705 710 715 720
 Gly Leu Thr Leu His Asn Ser Gln Ser Glu Pro
 725 730

<210> 16
 <211> 584
 <212> PRT
 <213> Homo sapiens

<400> 16

Met	Lys	Met	Ala	Ser	Ser	Leu	Ala	Phe	Leu	Leu	Leu	Asn	Phe	His	Val
1															15
Ser	Leu	Phe	Leu	Val	Gln	Leu	Leu	Thr	Pro	Cys	Ser	Ala	Gln	Phe	Ser
															30
Val	Leu	Gly	Pro	Ser	Gly	Pro	Ile	Leu	Ala	Met	Val	Gly	Glu	Asp	Ala
															45
Asp	Leu	Pro	Cys	His	Leu	Phe	Pro	Thr	Met	Ser	Ala	Glu	Thr	Met	Glu
															60
Leu	Arg	Trp	Val	Ser	Ser	Leu	Arg	Gln	Val	Val	Asn	Val	Tyr	Ala	
															80
Asp	Gly	Lys	Glu	Val	Glu	Asp	Arg	Gln	Ser	Ala	Pro	Tyr	Arg	Gly	Arg
															95
Thr	Ser	Ile	Leu	Arg	Asp	Gly	Ile	Thr	Ala	Gly	Lys	Ala	Ala	Leu	Arg
															110
Ile	His	Asn	Val	Thr	Ala	Ser	Asp	Ser	Gly	Lys	Tyr	Leu	Cys	Tyr	Phe
															125
Gln	Asp	Gly	Asp	Phe	Tyr	Glu	Lys	Ala	Leu	Val	Glu	Leu	Lys	Val	Ala
															140
Ala	Leu	Gly	Ser	Asp	Leu	His	Ile	Glu	Val	Lys	Gly	Tyr	Glu	Asp	Gly
															160
Gly	Ile	His	Leu	Glu	Cys	Arg	Ser	Thr	Gly	Trp	Tyr	Pro	Gln	Pro	Gln
															175
Ile	Lys	Trp	Ser	Asp	Thr	Lys	Gly	Glu	Asn	Ile	Pro	Ala	Val	Glu	Ala
															190
Pro	Val	Val	Ala	Asp	Gly	Val	Gly	Leu	Tyr	Ala	Val	Ala	Ala	Ser	Val

195	200	205
Ile Met Arg Gly Ser Ser Gly	Gly Gly Val Ser Cys	Ile Ile Arg Asn
210	215	220
Ser Leu Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Asp Pro		
225	230	235
Phe Phe Arg Ser Ala Gln Pro Trp Ile Ala Ala Leu Ala Gly Thr Leu		
245	250	255
Pro Ile Ser Leu Leu Leu Ala Gly Ala Ser Tyr Phe Leu Trp Arg		
260	265	270
Gln Gln Lys Glu Lys Ile Ala Leu Ser Arg Glu Thr Glu Arg Glu Arg		
275	280	285
Glu Met Lys Glu Met Gly Tyr Ala Ala Thr Glu Gln Glu Ile Ser Leu		
290	295	300
Arg Glu Lys Leu Gln Glu Leu Lys Trp Arg Lys Ile Gln Tyr Met		
305	310	315
Ala Arg Gly Glu Lys Ser Leu Ala Tyr His Glu Trp Lys Met Ala Leu		
325	330	335
Phe Lys Pro Ala Asp Val Ile Leu Asp Pro Asp Thr Ala Asn Ala Ile		
340	345	350
Leu Leu Val Ser Glu Asp Gln Arg Ser Val Gln Arg Ala Glu Glu Pro		
355	360	365
Arg Asp Leu Pro Asp Asn Pro Glu Arg Phe Glu Trp Arg Tyr Cys Val		
370	375	380
Leu Gly Cys Glu Asn Phe Thr Ser Gly Arg His Tyr Trp Glu Val Glu		
385	390	395
Val Gly Asp Arg Lys Glu Trp His Ile Gly Val Cys Ser Lys Asn Val		
405	410	415
Glu Arg Lys Lys Gly Trp Val Lys Met Thr Pro Glu Asn Gly Tyr Trp		
420	425	430
Thr Met Gly Leu Thr Asp Gly Asn Lys Tyr Arg Ala Leu Thr Glu Pro		
435	440	445
Arg Thr Asn Leu Lys Leu Pro Glu Pro Pro Arg Lys Val Gly Ile Phe		
450	455	460
Leu Asp Tyr Glu Thr Gly Glu Ile Ser Phe Tyr Asn Ala Thr Asp Gly		
465	470	475
Ser His Ile Tyr Thr Phe Pro His Ala Ser Phe Ser Glu Pro Leu Tyr		
485	490	495
Pro Val Phe Arg Ile Leu Thr Leu Glu Pro Thr Ala Leu Thr Ile Cys		
500	505	510
Pro Ile Pro Lys Glu Val Glu Ser Ser Pro Asp Pro Asp Leu Val Pro		
515	520	525
Asp His Ser Leu Glu Thr Pro Leu Thr Pro Gly Leu Ala Asn Glu Ser		
530	535	540
Gly Glu Pro Gln Ala Glu Val Thr Ser Leu Leu Leu Pro Ala His Pro		
545	550	555
Gly Ala Glu Val Ser Pro Ser Ala Thr Thr Asn Gln Asn His Lys Leu		
565	570	575
Gln Ala Arg Thr Glu Ala Leu Tyr		
580		

<210> 17
<211> 350
<212> PRT
<213> Homo sapiens

<400> 17

Met Ala Ser Phe Leu Ala Phe Leu Leu Leu Asn Phe Arg Val Cys Leu
 1 5 10 15
 Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser Val Leu
 20 25 30
 Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu
 35 40 45
 Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Lys
 50 55 60
 Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly
 65 70 75 80
 Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser
 85 90 95
 Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Phe Arg Ile His
 100 105 110
 Asn Val Thr Gly Ser Asp Arg Trp Lys Tyr Leu Cys Tyr Phe Gln Asp
 115 120 125
 Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala Ala Leu
 130 135 140
 Gly Ser Asp Leu His Val Asp Val Lys Gly Tyr Lys Asp Gly Gly Ile
 145 150 155 160
 His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Gln
 165 170 175
 Trp Ser Asn Asn Lys Gly Glu Asn Ile Pro Thr Val Glu Ala Pro Val
 180 185 190
 Val Ala Asp Gly Val Gly Leu Tyr Ala Val Ala Ala Ser Val Ile Met
 195 200 205
 Arg Gly Ser Ser Gly Glu Gly Val Ser Cys Thr Ile Arg Asn Ser Leu
 210 215 220
 Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Arg Pro Phe Phe
 225 230 235 240
 Arg Ser Ala Gln Arg Trp Ile Ala Ala Leu Ala Gly Thr Leu Pro Val
 245 250 255
 Leu Leu Leu Leu Gly Gly Ala Gly Tyr Phe Leu Trp Gln Gln Gln
 260 265 270
 Glu Glu Lys Lys Thr Gln Phe Arg Lys Lys Lys Arg Glu Gln Glu Leu
 275 280 285
 Arg Glu Met Ala Trp Ser Thr Met Lys Gln Glu Gln Ser Thr Arg Val
 290 295 300
 Lys Leu Leu Glu Glu Leu Arg Trp Arg Ser Ile Gln Tyr Ala Ser Arg
 305 310 315 320
 Gly Glu Arg His Ser Ala Tyr Asn Glu Trp Lys Lys Ala Leu Phe Lys
 325 330 335
 Pro Gly Glu Glu Met Leu Gln Met Arg Leu His Phe Val Lys
 340 345 350

<210> 18
 <211> 513
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Lys Met Ala Ser Phe Leu Ala Phe Leu Leu Leu Asn Phe Arg Val
 1 5 10 15
 Cys Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser
 20 25 30
 Val Leu Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala

35	40	45
Asp	Leu Pro Cys His Leu Phe	Pro Thr Met Ser Ala Glu Thr Met Glu
50	55	60
Leu	Lys Trp Val Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala	
65	70	75 80
Asp	Gly Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg	
85	90	95
Thr	Ser Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Leu Arg	
100	105	110
Ile	His Asn Val Thr Ala Ser Asp Ser Gly Lys Tyr Leu Cys Tyr Phe	
115	120	125
Gln	Asp Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala	
130	135	140
Ala	Leu Gly Ser Asp Leu His Val Asp Val Lys Gly Tyr Lys Asp Gly	
145	150	155 160
Gly	Ile His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln	
165	170	175
Ile	Gln Trp Ser Asn Asn Lys Gly Glu Asn Ile Pro Thr Val Glu Ala	
180	185	190
Pro	Val Val Ala Asp Gly Val Gly Leu Tyr Ala Val Ala Ala Ser Val	
195	200	205
Ile	Met Arg Gly Ser Ser Gly Glu Gly Val Ser Cys Thr Ile Arg Ser	
210	215	220
Ser	Leu Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Asp Pro	
225	230	235 240
Phe	Phe Arg Ser Ala Gln Arg Trp Ile Ala Ala Leu Ala Arg Thr Leu	
245	250	255
Pro	Val Leu Leu Leu Leu Gly Gly Ala Gly Tyr Phe Leu Trp Gln	
260	265	270
Gln	Gln Glu Glu Lys Lys Thr Gln Phe Arg Lys Lys Lys Arg Glu Gln	
275	280	285
Glu	Leu Arg Glu Met Ala Trp Ser Thr Met Lys Gln Glu Gln Ser Thr	
290	295	300
Arg	Val Lys Leu Leu Glu Leu Arg Trp Arg Ser Ile Gln Tyr Ala	
305	310	315 320
Ser	Arg Gly Glu Arg His Ser Ala Tyr Asn Glu Trp Lys Lys Ala Leu	
325	330	335
Phe	Lys Pro Ala Asp Val Ile Leu Asp Pro Lys Thr Ala Asn Pro Ile	
340	345	350
Leu	Leu Val Ser Glu Asp Gln Arg Ser Val Gln Arg Ala Lys Glu Pro	
355	360	365
Gln	Asp Leu Pro Asp Asn Pro Glu Arg Phe Asn Trp His Tyr Cys Val	
370	375	380
Leu	Gly Cys Glu Ser Phe Ile Ser Gly Arg His Tyr Trp Glu Val Glu	
385	390	395 400
Val	Gly Asp Arg Lys Glu Trp His Ile Gly Val Cys Ser Lys Asn Val	
405	410	415
Gln	Arg Lys Gly Trp Val Lys Met Thr Pro Glu Asn Gly Phe Trp Thr	
420	425	430
Met	Gly Leu Thr Asp Gly Asn Lys Tyr Arg Thr Leu Thr Glu Pro Arg	
435	440	445
Thr	Asn Leu Lys Leu Pro Lys Pro Pro Lys Lys Val Gly Val Phe Leu	
450	455	460
Asp	Tyr Glu Thr Gly Asp Ile Ser Phe Tyr Asn Ala Val Asp Gly Ser	
465	470	475 480
His	Ile His Thr Phe Leu Asp Val Ser Phe Ser Glu Ala Leu Tyr Pro	
485	490	495

Val Phe Arg Ile Leu Thr Leu Glu Pro Thr Ala Leu Ser Ile Cys Pro
500 505 510
Ala

<210> 19
<211> 290
<212> PRT
<213> Homo sapiens

<400> 19
Met Ala Ser Phe Leu Ala Phe Leu Leu Asn Phe Arg Val Cys Leu
1 5 10 15
Leu Leu Leu Gln Leu Leu Met Pro His Ser Ala Gln Phe Ser Val Leu
20 25 30
Gly Pro Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala Asp Leu
35 40 45
Pro Cys His Leu Phe Pro Thr Met Ser Ala Glu Thr Met Glu Leu Lys
50 55 60
Trp Val Ser Ser Ser Leu Arg Gln Val Val Asn Val Tyr Ala Asp Gly
65 70 75 80
Lys Glu Val Glu Asp Arg Gln Ser Ala Pro Tyr Arg Gly Arg Thr Ser
85 90 95
Ile Leu Arg Asp Gly Ile Thr Ala Gly Lys Ala Ala Phe Arg Ile His
100 105 110
Asn Val Thr Gly Ser Asp Arg Trp Lys Tyr Leu Cys Tyr Phe Gln Asp
115 120 125
Gly Asp Phe Tyr Glu Lys Ala Leu Val Glu Leu Lys Val Ala Ala Leu
130 135 140
Gly Ser Asp Leu His Val Asp Val Lys Gly Tyr Lys Asp Gly Gly Ile
145 150 155 160
His Leu Glu Cys Arg Ser Thr Gly Trp Tyr Pro Gln Pro Gln Ile Gln
165 170 175
Trp Ser Asn Asn Lys Gly Glu Asn Ile Pro Thr Val Glu Ala Pro Val
180 185 190
Val Ala Asp Gly Val Gly Leu Tyr Ala Val Ala Ala Ser Val Ile Met
195 200 205
Arg Gly Ser Ser Gly Glu Gly Val Ser Cys Thr Ile Arg Asn Ser Leu
210 215 220
Leu Gly Leu Glu Lys Thr Ala Ser Ile Ser Ile Ala Arg Pro Phe Phe
225 230 235 240
Arg Ser Ala Gln Arg Trp Ile Ala Ala Leu Ala Gly Thr Leu Pro Val
245 250 255
Leu Leu Leu Leu Leu Gly Gly Ala Gly Tyr Phe Leu Trp Gln Gln Gln
260 265 270
Glu Glu Lys Lys Thr Gln Phe Arg Lys Lys Lys Arg Glu Gln Glu Leu
275 280 285
Arg Glu
290

<210> 20
<211> 819
<212> DNA
<213> Homo sapiens

<400> 20
atgatcttcc tcctgcta at gttgagcctg gaattgcagc ttcaccagat agcagcttta 60
ttcacagtga cagtcctaa ggaactgtac ataatacgac atggcagcaa tgtgaccctg 120
gaatgcaact ttgacactgg aagtcatgtg aaccttggag caataacagc cagtttgcaa 180
aagggtggaaa atgatacatc cccacaccgt gaaagagcca ctttgctgga ggagcagctg 240
ccccttaggga aggccctcggtt ccacataacct caagtccaa tgagggacga aggacagttac 300
caatgcataa tcatctatgg ggtcgccctgg gactacaagt acctgactct gaaagtcaaa 360
gcttcctaca ggaaaataaaa cactcacatc ctaaagggttc cagaaacaga ttaggttagag 420
ctcacctgcc aggctacagg ttatcctctg gcagaagtat cctggccaaa cgtcagcgtt 480
cctgccaaca ccagccactc caggaccctt gaaggccctt accaggtcac cagtgttctg 540
cgccctaaagc caccctctgg cagaaacttc agctgtgtgt tctgaaatac tcacgtgagg 600
gaacttactt tggccagcat tgacccctaa agtcatgtgg aaccaggac ccatccaact 660
tggctgcttc acattttcat cccctctgc atcattgttt tcattttcat agccacagtg 720
atagccctaa gaaaacaact ctgtcaaaag ctgtattttt caaaagacac aacaaaaaaga 780
cctgtcacca caacaaagag ggaagtgaac agtgctatc 819

<210> 21
<211> 549
<212> DNA
<213> Homo sapiens

<400> 21
atgatcttcc tcctgcta at gttgagcctg gaattgcagc ttcaccagat agcagcttta 60
ttcacagtga cagtcctaa ggaactgtac ataatacgac atggcagcaa tgtgaccctg 120
gaatgcaact ttgacactgg aagtcatgtg aaccttggag caataacagc cagtttgcaa 180
aagggtggaaa atgatacatc cccacaccgt gaaagagcca ctttgctgga ggagcagctg 240
ccccttaggga aggccctcggtt ccacataacct caagtccaa tgagggacga aggacagttac 300
caatgcataa tcatctatgg ggtcgccctgg gactacaagt acctgactct gaaagtcaaa 360
ggtcagatgg aaccaggac ccatccaact tggctgcttc acattttcat cccctctgc 420
atcattgttt tcattttcat agccacagtg atagccctaa gaaaacaact ctgtcaaaag 480
ctgtattttt caaaagacac aacaaaaaaga cctgtcacca caacaaagag ggaagtgaac 540
agtgtatc 549

<210> 22
<211> 873
<212> DNA
<213> Homo sapiens

<400> 22
atgaggatat ttgctgtctt tatattcatg acctactggc atttgctgaa cgcattttact 60
gtcacgggttc ccaaggacct atatgtggta gagtatggta gcaatatgac aattgaatgc 120
aaattcccaag tagaaaaaca attagacctg gctgcactaa ttgtctattg gaaaatggag 180
gataagaaca ttattcaatt tgcgtatgg gaggaaagacc tgaaggttca gcatagtagc 240
tacagacaga gggcccggtt gttgaaggac cagctctccc tggaaatgc tgcacttcag 300
atcacagatg taaaattgca ggtatgcaggg gtgtaccgct gcatgatcag ctatgggtt 360
gccgactaca agcgaattac tgcgtaaatgc aatgccccat acaacaaaat caaccaaaga 420
attttgttgg tggatccagt cacctctgaa catgaactga catgtcaggc ttagggctac 480
cccaaggccg aagtcatctg gacaaggcgt gaccatcaag tcctgagtgg taagaccacc 540
accaccaatt ccaagagaga ggagaagctt ttcaatgtga ccagcacact gagaatcaac 600
acaacaaacta atgagatttt ctactgcact ttttaggat tagatctga gggaaaaccat 660
acagctgaat tggcatccc agaactaccc ctggcacatc ctccaaatga aaggactcac 720
tttgtaattt tggagccat cttattatgc cttgggtgttag cactgacatt catcttccgt 780
ttaagaaaaaag ggagaatgtat ggtatgtggaaa aaatgtggca tccaagatac aaactcaaag 840
aagcaaaatgtt atacacatcc ggaggagacg taa 873

<210> 23
<211> 951

<212> DNA
<213> Homo sapiens

<400> 23
atgctgcgtc ggcggggcag ccctggcatg ggtgtcatg tgggtgcagc cctgggagca 60
ctgtggttct gcctcacagg agccctggag gtccaggatcc ctgaagaccc agtggggca 120
ctggggca ccgatgccac cctgtgtgc tccttctccc ctgagctgg cttcagcctg 180
gcacagctca acctcatctg gcagctgaca gacaccaaac agctggtgca cagctttgtc 240
gagggccagg accagggcag cgcctatgcc aaccgcacgg ccctcttccc ggacctgctg 300
gcacaggcgca atgcattccct gaggctgcag cgctgcgtg tggcggacga gggcagcttc 360
acctgcttcg tgagcatccg ggatttcggc agcgtgcgc tcagcctgca ggtggccgct 420
ccctactcga agcccgat gaccctggag cccaacaagg acctgcggcc aggggacacg 480
gtgaccatca cgtgctccag ctaccaggc tacccctgagg ctgaggtgtt ctggcaggat 540
ggcagggtg tgccctgac tggcaacgtg accacgtcgc agatggccaa cgagcaggc 600
ttgtttagt tgacacagct cctgggggtg gtgtgggtg caaatggcac ctacagctgc 660
ctgggtgcga accccgtct gcagcaggat ggcacggct ctgtcaccat cacagggcag 720
cctatgacat tccccccaga ggccctgtgg gtgaccgtgg ggctgtctgt ctgtctcatt 780
gcaactgctgg tggccctggc ttctgtgtc tggagaaaga tcaaacagag ctgtgaggag 840
gagaatgcag gagctgagga ccaggatggg gagggagaag gctccaagac agccctgcag 900
cctctgaaac actctgacag caaagaagat gatggacaag aaatagcctg a 951

<210> 24
<211> 316
<212> PRT
<213> Homo sapiens

<400> 24
Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly Ala
1 5 10 15
Ala Leu Gly Ala Leu Trp Phe Cys Leu Thr Gly Ala Leu Glu Val Gln
20 25 30
Val Pro Glu Asp Pro Val Val Ala Leu Val Gly Thr Asp Ala Thr Leu
35 40 45
Cys Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn
50 55 60
Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Ala
65 70 75 80
Glu Gly Gln Asp Gln Gly Ser Ala Tyr Ala Asn Arg Thr Ala Leu Phe
85 90 95
Pro Asp Leu Leu Ala Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
100 105 110
Arg Val Ala Asp Glu Gly Ser Phe Thr Cys Phe Val Ser Ile Arg Asp
115 120 125
Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
130 135 140
Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp Thr
145 150 155 160
Val Thr Ile Thr Cys Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu Val
165 170 175
Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Thr
180 185 190
Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Asp Val His Ser Val Leu
195 200 205
Arg Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn
210 215 220
Pro Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly Gln
225 230 235 240

Pro	Met	Thr	Phe	Pro	Pro	Glu	Ala	Leu	Trp	Val	Thr	Val	Gly	Leu	Ser
			245						250						255
Val	Cys	Leu	Ile	Ala	Leu	Leu	Val	Ala	Leu	Ala	Phe	Val	Cys	Trp	Arg
			260						265						270
Lys	Ile	Lys	Gln	Ser	Cys	Glu	Glu	Glu	Asn	Ala	Gly	Ala	Glu	Asp	Gln
			275						280						285
Asp	Gly	Glu	Gly	Gly	Ser	Lys	Thr	Ala	Leu	Gln	Pro	Leu	Lys	His	
			290						295						300
Ser	Asp	Ser	Lys	Glu	Asp	Asp	Gly	Gln	Glu	Ile	Ala				
			305						310						315

<210> 25
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<400> 25
ctcgaggaat tcgcccatt gatcttcctc ctgctaat 38

<210> 26
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer

<221> misc_feature
<222> (0)...(0)
<223> This sequence is listed from 3' to 5'.

<400> 26
ggaaagtgaa cagtgtatc gcggccgcaa aaaa 34

<210> 27
<211> 948
<212> DNA
<213> Mus musculus

<400> 27
atgcgtcgag gatgggggtgg ccccagtgtg ggtgtgtgtg tgcgcacagc gctgggggtg 60
ctgtgcctct gcctcacagg agctgtggaa gtccaggctt ctgaagaccc cgtggtgcc 120
ctggtgacca cggatgccac cttacgctgc tccctttccc cagagctgg cttcagtctg 180
gcacagctca acctcatctg gcagctgaca gacaccaaac agctggtgca cagttcacg 240
gagggccggg accaaggcag tgcctactcc aaccgcacag cgctctccc tgacctgtt 300
gtgcaaggca atgcgtcctt gaggctgcag cgctcccgag taaccgacga gggcagctac 360
acctgtttt tgagcattca ggactttgac agcgtgctg tttagcctgca ggtggccgccc 420
ccctactcga agcccagcat gaccctggag cccaaacaagg acctacgtcc agggAACATG 480
gtgaccatca cgtgtcttag ctaccaggc tatccggagg ccgaggtgtt ctggaaaggat 540
ggacagggag tgcccttgac tggcaatgtg acatcccaga tggccaacga gccccggctt 600
ttcgatgttc acagcgtgct gaggggtgggctt ctgggtgcta acggcaccta cagctgcctg 660
gtacgcaacc cggtgttgca gcaagatgtt cacggctcag tcaccatcac agggcagccc 720
ctgacattcc cccctgaggc tctgtggta accgtgggac tctctgtctg tcttggta 780

ctactggtgg ccctggctt cgttgctgg agaaaatca agcagagctg cgaggaggag 840
aatgcagggtg ccaaggacca gcatggagat ggagaaggat ccaagacacgc tctacggcct 900
ctgaaaacct ctgaaaacaa agaagatgac ggacaagaaa ttgcttga 948

<210> 28
<211> 315
<212> PRT
<213> Mus musculus

<400> 28
Met Leu Arg Gly Trp Gly Gly Pro Ser Val Gly Val Cys Val Arg Thr
1 5 10 15
Ala Leu Gly Val Leu Cys Leu Cys Leu Thr Gly Ala Val Glu Val Gln
20 25 30
Val Ser Glu Asp Pro Val Val Ala Leu Val Asp Thr Asp Ala Thr Leu
35 40 45
Arg Cys Ser Phe Ser Pro Glu Pro Gly Phe Ser Leu Ala Gln Leu Asn
50 55 60
Leu Ile Trp Gln Leu Thr Asp Thr Lys Gln Leu Val His Ser Phe Thr
65 70 75 80
Glu Gly Arg Asp Gln Gly Ser Ala Tyr Ser Asn Arg Thr Ala Leu Phe
85 90 95
Pro Asp Leu Leu Val Gln Gly Asn Ala Ser Leu Arg Leu Gln Arg Val
100 105 110
Arg Val Thr Asp Glu Gly Ser Tyr Thr Cys Phe Val Ser Ile Gln Asp
115 120 125
Phe Asp Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser Lys
130 135 140
Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asn Met
145 150 155 160
Val Thr Ile Thr Cys Ser Ser Tyr Gln Gly Tyr Pro Glu Ala Glu Val
165 170 175
Phe Trp Lys Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr Ser
180 185 190
Gln Met Ala Asn Glu Arg Gly Leu Phe Asp Val His Ser Val Leu Arg
195 200 205
Val Val Leu Gly Ala Asn Gly Thr Tyr Ser Cys Leu Val Arg Asn Pro
210 215 220
Val Leu Gln Gln Asp Ala His Gly Ser Val Thr Ile Thr Gly Gln Pro
225 230 235 240
Leu Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu Ser Val
245 250 255
Cys Leu Val Val Leu Leu Val Ala Leu Ala Phe Val Cys Trp Arg Lys
260 265 270
Ile Lys Gln Ser Cys Glu Glu Asn Ala Gly Ala Lys Asp Gln Asp
275 280 285
Gly Asp Gly Glu Gly Ser Lys Thr Ala Leu Arg Pro Leu Lys Pro Ser
290 295 300
Glu Asn Lys Glu Asp Asp Gly Gln Glu Ile Ala
305 310 315

<210> 29
<211> 322
<212> PRT
<213> Mus musculus

<400> 29

Met	Gln	Leu	Lys	Cys	Pro	Cys	Phe	Val	Ser	Leu	Gly	Thr	Arg	Gln	Pro
1			5						10						15
Val	Trp	Lys	Lys	Leu	His	Val	Ser	Ser	Gly	Phe	Phe	Ser	Gly	Leu	Gly
								20		25					30
Leu	Phe	Leu	Leu	Leu	Ser	Ser	Leu	Cys	Ala	Ala	Ser	Ala	Glu	Thr	
								35		40				45	
Glu	Val	Gly	Ala	Met	Val	Gly	Ser	Asn	Val	Val	Leu	Ser	Cys	Ile	Asp
								50		55				60	
Pro	His	Arg	Arg	His	Phe	Asn	Leu	Ser	Gly	Leu	Tyr	Val	Tyr	Trp	Gln
								65		70				80	
Ile	Glu	Asn	Pro	Glu	Val	Ser	Val	Thr	Tyr	Tyr	Leu	Pro	Tyr	Lys	Ser
								85		90				95	
Pro	Gly	Ile	Asn	Val	Asp	Ser	Ser	Tyr	Lys	Asn	Arg	Gly	His	Leu	Ser
								100		105				110	
Leu	Asp	Ser	Met	Lys	Gln	Gly	Asn	Phe	Ser	Leu	Tyr	Leu	Lys	Asn	Val
								115		120				125	
Thr	Pro	Gln	Asp	Thr	Gln	Glu	Phe	Thr	Cys	Arg	Val	Phe	Met	Asn	Thr
								130		135				140	
Ala	Thr	Glu	Leu	Val	Lys	Ile	Leu	Glu	Glu	Val	Val	Arg	Leu	Arg	Val
								145		150				160	
Ala	Ala	Asn	Phe	Ser	Thr	Pro	Val	Ile	Ser	Thr	Ser	Asp	Ser	Ser	Asn
								165		170				175	
Pro	Gly	Gln	Glu	Arg	Thr	Tyr	Thr	Cys	Met	Ser	Lys	Asn	Gly	Tyr	Pro
								180		185				190	
Glu	Pro	Asn	Leu	Tyr	Trp	Ile	Asn	Thr	Asp	Asn	Ser	Leu	Ile	Asp	
								195		200				205	
Thr	Ala	Leu	Gln	Asn	Asn	Thr	Val	Tyr	Leu	Asn	Lys	Leu	Gly	Leu	Tyr
								210		215				220	
Asp	Val	Ile	Ser	Thr	Leu	Arg	Leu	Pro	Trp	Thr	Ser	Arg	Gly	Asp	Val
								225		230				240	
Leu	Cys	Cys	Val	Glu	Asn	Val	Ala	Leu	His	Gln	Asn	Ile	Thr	Ser	Ile
								245		250				255	
Ser	Gln	Ala	Glu	Ser	Phe	Thr	Gly	Asn	Asn	Thr	Lys	Asn	Pro	Gln	Glu
								260		265				270	
Thr	His	Asn	Asn	Glu	Leu	Lys	Val	Leu	Val	Pro	Val	Leu	Ala	Val	Leu
								275		280				285	
Ala	Ala	Ala	Ala	Phe	Val	Ser	Phe	Ile	Ile	Tyr	Arg	Arg	Thr	Arg	Pro
								290		295				300	
His	Arg	Ser	Tyr	Thr	Gly	Pro	Lys	Thr	Val	Gln	Leu	Glu	Leu	Thr	Asp
								305		310				315	
His	Ala														320

<210> 30
<211> 744
<212> DNA
<213> Mus musculus

<220>
<221> misc_feature
<222> (1)...(744)
<223> mB7-H2

<221> CDS
<222> (1)...(744)

<400> 30
atg ctg ctc ctg ctg ccg ata ctg aac ctg agc tta caa ctt cat cct 48
Met Leu Leu Leu Leu Pro Ile Leu Asn Leu Ser Leu Gln Leu His Pro
1 5 10 15

gta gca gct tta ttc acc gtg aca gcc cct aaa gaa gtg tac acc gta 96
Val Ala Ala Leu Phe Thr Val Thr Ala Pro Lys Glu Val Tyr Thr Val
20 25 30

gac gtc ggc agc agt gtg agc ctg gag tgc gat ttt gac cgc aga gaa 144
Asp Val Gly Ser Ser Val Ser Leu Glu Cys Asp Phe Asp Arg Arg Glu
35 40 45

tgc act gaa ctg gaa ggg ata aga gcc agt ttg cag aag gta gaa aat 192
Cys Thr Glu Leu Glu Gly Ile Arg Ala Ser Leu Gln Lys Val Glu Asn
50 55 60

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Asp Thr Ser Leu Gln Ser Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
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ccc ctg gga aag gct ttg ttc cac atc cct agt gtc caa gtg aga gat 288
Pro Leu Gly Lys Ala Leu Phe His Ile Pro Ser Val Gln Val Arg Asp
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Ser Gly Gln Tyr Arg Cys Leu Val Ile Cys Gly Ala Ala Trp Asp Tyr
100 105 110

aag tac ctg acg gtg aaa gtc aaa gct tct tac atg agg ata gac act 384
Lys Tyr Leu Thr Val Lys Val Lys Ala Ser Tyr Met Arg Ile Asp Thr
115 120 125

agg atc ctg gag gtt cca ggt aca ggg gag gtg cag ctt acc tgc cag 432
Arg Ile Leu Glu Val Pro Gly Thr Gly Glu Val Gln Leu Thr Cys Gln
130 135 140

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Ala Arg Gly Tyr Pro Leu Ala Glu Val Ser Trp Gln Asn Val Ser Val
145 150 155 160

cct gcc aac acc agc cac atc agg acc ccc gaa ggc ctc tac cag gtc 528
Pro Ala Asn Thr Ser His Ile Arg Thr Pro Glu Gly Leu Tyr Gln Val
165 170 175

acc agt gtt ctg cgc ctc aag cct cag cct agc aga aac ttc agc tgc 576
Thr Ser Val Leu Arg Leu Lys Pro Gln Pro Ser Arg Asn Phe Ser Cys
180 185 190

atg ttc tgg aat gct cac atg aag gag ctg act tca gcc atc att gac 624
Met Phe Trp Asn Ala His Met Lys Glu Leu Thr Ser Ala Ile Ile Asp
195 200 205

cct ctg agt cggt atg gaa ccc aaa gtc ccc aga acg tgg cca ctt cat 672
Pro Leu Ser Arg Met Glu Pro Lys Val Pro Arg Thr Trp Pro Leu His
210 215 220

gtt ttc atc ccg gcc tgc acc atc gct ttg atc ttc ctg gcc ata gtg 720
Val Phe Ile Pro Ala Cys Thr Ile Ala Leu Ile Phe Leu Ala Ile Val
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Asp Val Gly Ser Ser Val Ser Leu Glu Cys Asp Phe Asp Arg Arg Glu
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Cys Thr Glu Leu Glu Gly Ile Arg Ala Ser Leu Gln Lys Val Glu Asn
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Asp Thr Ser Leu Gln Ser Glu Arg Ala Thr Leu Leu Glu Glu Gln Leu
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Pro Leu Gly Lys Ala Leu Phe His Ile Pro Ser Val Gln Val Arg Asp
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Ser Gly Gln Tyr Arg Cys Leu Val Ile Cys Gly Ala Ala Trp Asp Tyr
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Lys Tyr Leu Thr Val Lys Val Lys Ala Ser Tyr Met Arg Ile Asp Thr
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Arg Ile Leu Glu Val Pro Gly Thr Gly Glu Val Gln Leu Thr Cys Gln
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Ala Arg Gly Tyr Pro Leu Ala Glu Val Ser Trp Gln Asn Val Ser Val
145 150 155 160
Pro Ala Asn Thr Ser His Ile Arg Thr Pro Glu Gly Leu Tyr Gln Val
165 170 175
Thr Ser Val Leu Arg Leu Lys Pro Gln Pro Ser Arg Asn Phe Ser Cys
180 185 190
Met Phe Trp Asn Ala His Met Lys Glu Leu Thr Ser Ala Ile Ile Asp
195 200 205
Pro Leu Ser Arg Met Glu Pro Lys Val Pro Arg Thr Trp Pro Leu His
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Ile Ile Gln Arg Lys Arg Ile
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Gly	Ser	Asn	Val	Thr	Met	Glu	Cys	Arg	Phe	Pro	Val	Glu	Arg	Glu	Leu
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Asp	Leu	Leu	Ala	Leu	Val	Val	Tyr	Trp	Glu	Lys	Glu	Asp	Glu	Gln	Val
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Ile	Gln	Phe	Val	Ala	Gly	Glu	Glu	Asp	Leu	Lys	Pro	Gln	His	Ser	Asn
				65			70			75			80		
Phe	Arg	Gly	Arg	Ala	Ser	Leu	Pro	Lys	Asp	Gln	Leu	Leu	Lys	Gly	Asn
				85			90					95			
Ala	Ala	Leu	Gln	Ile	Thr	Asp	Val	Lys	Leu	Gln	Asp	Ala	Gly	Val	Tyr
				100			105					110			
Cys	Cys	Ile	Ile	Ser	Tyr	Gly	Gly	Ala	Asp	Tyr	Lys	Arg	Ile	Thr	Leu
				115			120				125				
Lys	Val	Asn	Ala	Pro	Tyr	Arg	Lys	Ile	Asn	Gln	Arg	Ile	Ser	Val	Asp
				130			135				140				
Pro	Ala	Thr	Ser	Glu	His	Glu	Leu	Ile	Cys	Gln	Ala	Glu	Gly	Tyr	Pro
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Glu	Ala	Glu	Val	Ile	Trp	Thr	Asn	Ser	Asp	His	Gln	Pro	Val	Ser	Gly
				165			170					175			
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Thr	Ser	Ser	Leu	Arg	Val	Asn	Ala	Thr	Ala	Asn	Asp	Val	Phe	Tyr	Cys
				195			200					205			
Thr	Phe	Trp	Arg	Ser	Gln	Pro	Gly	Gln	Asn	His	Thr	Ala	Glu	Leu	Ile
				210			215				220				
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				225			230			235			240		
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				245			250					255			
Leu	Leu	Phe	Leu	Arg	Lys	Gln	Val	Arg	Met	Leu	Asp	Val	Glu	Lys	Cys
				260			265					270			
Gly	Val	Glu	Asp	Thr	Ser	Ser	Lys	Asn	Arg	Asn	Asp	Thr	Gln	Phe	Glu
				275			280					285			
Glu	Thr														
		290													